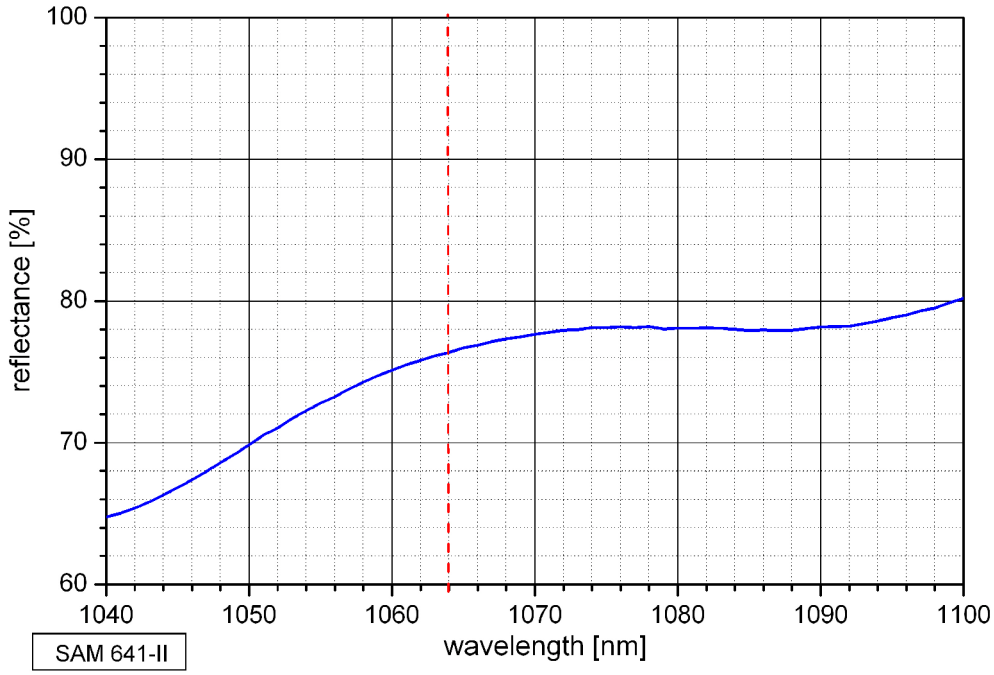
SAM™ Data Sheet SAM-1064-23-124ps-x, λ = 1064 nm
for microchip laser Q-switching

Laser wavelength	λ = 1064 nm
High reflection band (R > 70%)	λ = 1050 .. 1100 nm
Reflectance at 808 nm	R_{808} = 75 %
Absorbance	A_0 = 23 %
Modulation depth	ΔR = 12 %
Non-saturable loss	A_{ns} = 11 %
Saturation fluence	Φ_{sat} = 70 µJ/cm²
Relaxation time constant	τ ~ 124 ps
Damage threshold	500 MW/cm²
Chip area	4mm x 4mm; other dimensions on request
Chip thickness	450 µm
Dielectric coating	HR @ 808 nm

Mounting option **x** denotes the type of mounting as follows:

x = 0	unmounted
x = 12.7 g	glued on a copper heat sink with 12.7 mm ∅
x = 25.4 g	glued on a copper heat sink with 25.4 mm ∅
x = 12.7 s	soldered on a copper heat sink with 12.7 mm ∅
x = 25.4 s	soldered on a copper heat sink with 25.4 mm ∅
x = 25.4 w	soldered on a water cooled copper heat sink with 25.4 mm ∅
x = FC	mounted on a 1 m single mode fiber cable with FC connector

Low intensity spectral reflectance



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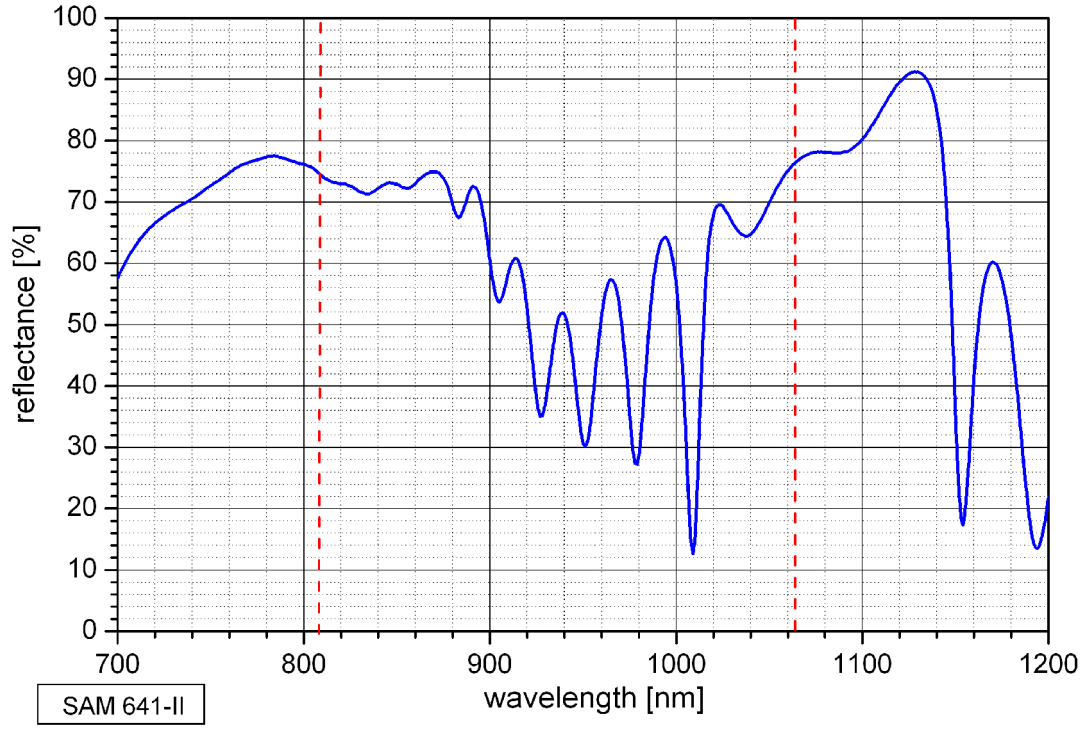
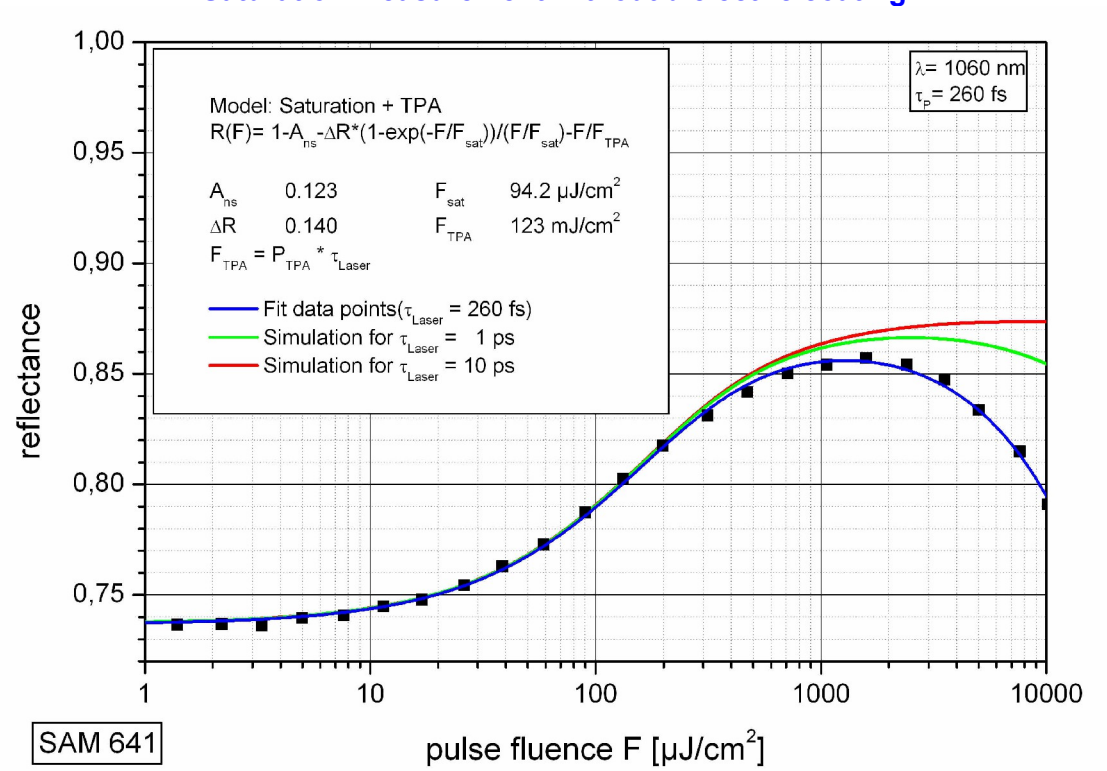


Saturation measurement without dielectric coating



The saturation measurement has been done using a pulsed laser source with 260 fs pulse duration on a piece from the same wafer # 641, but other dielectric coating with lower absorption and higher saturation fluence. Due to the high peak power density the two photon absorption (TPA) is significant in

this case. The green and red curves are simulated for the same pulse fluences, but longer pulse durations of 1 ps and 10 ps respectively..

Pump-probe measurement